

Serial No.: 10/072,161
Art Unit: 1725

IN THE CLAIMS

Please amend the Claims as follows.

25. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties formed by ~~the process of:~~

- (a) providing a metal matrix of aluminum;
- (b) providing said metal matrix in a liquid state containing a liquid titanium;
- (c) reacting a salt bath containing a carbon with said liquid titanium element to form a uniform distribution of finely sized titanium carbide ceramic phase particles formed and dispersed in-situ uniformly in said aluminum metal matrix; and
- (d) providing an aluminum alloy product having preferred mechanical properties formed from said uniform distribution of finely sized titanium carbide ceramic phase particles formed and dispersed in-situ uniformly in said aluminum metal matrix.

26. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 25, wherein said ~~providing an~~ aluminum alloy product having preferred mechanical properties comprises providing an uncrystallized structure during a deformation operation.

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27. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 25, comprising increasing dispersion strengthening in said aluminum alloy ~~alloy~~ product having preferred mechanical properties.

28. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 26, wherein said uniform distribution consists of a substantially cluster-free distribution of no more than two particles attached to one another at a magnification of 500X.

29. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~ as set forth in Claim 28, wherein said finely sized ceramic phase particles comprise titanium carbide particles having an average particle diameter of less than about 1 micron formed and dispersed in situ in said aluminum metal matrix.

30. (Currently Amended) An aluminum alloy product by process having preferred mechanical properties ~~formed by the process of~~